



In Support of Educators: Strategies That Work

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The positive effects of a dedicated teacher circle outward like the waves that form when you drop a rock into a pond. Unlike the fleeting, surface ripples caused by a rock, a teacher's influence is deep and enduring. Over decades, the effects of dedicated teachers flow and grow in students, fellow teachers, school and district leaders, families, and communities.

Introduction: Educators and EDC

By Kim Elliott—Every day, an educator makes a difference in the life of a student. In partnership with families, they ignite a love for lifelong learning. With community and industry partners, they pave the way to career success. Right now, as you read this sentence, a teacher is thinking about, preparing to teach, listening to, or talking with a student. Thirty years from today, that student will remember what he or she learned from the teacher. Beyond recalling the facts and skills he or she acquired, the student will continue to draw strength from the teacher's support.

The positive effects of a dedicated teacher circle outward like the waves that form when you drop a rock into a pond. Unlike the fleeting, surface ripples caused by a rock, a teacher's influence is deep and enduring. Over decades, the effects of dedicated teachers flow and grow in students, fellow teachers, school and district leaders, families, and communities.

Teachers' support of students, and the lasting effects of that support, is one of the most powerful factors in shaping a country's future. Their work is as complex and challenging as it is critical. Each student brings a wide range of ever-evolving needs and strengths. Each school and district has an ever-shifting landscape of priorities, pressures, resources, and reforms. Amidst it all, how can we support those who help foster the future? EDC believes that high quality, ongoing professional learning is key and we have acted on that belief for almost 60 years.

EDC [designs and delivers effective professional learning programs and resources](#) that help educators across the U.S. and around the world close opportunity gaps and improve outcomes for students. Our support for educators is evidence-based, impactful, and produces real results for students ([learn more about our results by exploring descriptions of some of our projects](#)). We know that "one-size-fits-all" approaches to professional development end up fitting no one. Thus, the form that our support for educators takes looks very different based on learners' unique contexts and needs. Some common formats include the following:

- Face-to-face institutes, seminars, courses, workshops, and instructional coaching
- Facilitated technology-enhanced learning: facilitated online courses, [interactive audio instruction](#), webinars, online coaching programs

- Self-guided online learning toolkits and resource hubs
- Published guides and multi-media programs for teachers and staff developers
- Consultation to build the capacity of administrators to serve as instructional leaders
- Professional learning experiences that draw upon several of the above approaches

No matter what the format looks like, our professional learning programs and resources:

- Focus on rigorous, evidence-based content in all academic subjects and areas pivotal to optimal learning (physical health, mental health, social-emotional development, safety)
- Build the capacity of educators at all grade levels (preschool to beyond high school) and in school and in out-of-school settings
- Offer effective strategies to support the success of English learners, students with disabilities, and students from underrepresented groups and high-need communities
- Prepare educators to draw on data and formative assessment to guide and refine their work with children and youth
- Give educators opportunities to immediately apply their new knowledge, skills, and strategies with children and youth
- Foster collaboration (e.g., professional learning communities, instructional coaching) to sustain job-embedded learning
- Engage educators in active learning, including having them tackle the same investigations, challenges, and projects they will use in classrooms and programs
- Reflect our respect for educators, the expertise that they bring, and the key role they play in strengthening and informing the design of professional learning



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In the pages that follow, three of EDC’s professional learning designers and experts—Jessica Juliuson, Nevin Katz, and John Parris—discuss key considerations in supporting teachers. Each expert brings a unique perspective and set of lessons learned. Yet the core elements of our approach are evident in the writing of all three, as is EDC’s deep commitment to supporting educators and appreciation for their important work.

Jessica Juliuson shares her insights from EDC’s work to help teachers integrate rigorous academic and career education to ensure college and career success. Nevin Katz reflects on the powerful role that facilitated online courses can play in helping teachers acquire new instructional strategies and teaching tools. John Parris explores why it is crucial for educational software designers to expand how they think about usability in order to develop better tools and supports for teachers.

After John’s essay, you will find a sampler of EDC’s free resources for teachers. Together, these essays and resources present a rich yet slender slice of our work in support of educators. We hope to share more of our work in future essay collections, and we invite your questions and feedback on this collection.



Focus on Teaching: Realistic, Targeted Human Support



By Jessica Juliuson—Most of us have an intuitive sense that teaching matters. What happens in the classroom—“on the ground” where interactions with students are direct and immediate—feels important. Research has proven that our intuition is right. Within schools, [the quality of teaching is the most important factor in student achievement](#). In the context of systemic reform efforts, however, the importance of fostering high quality, effective, and engaging classroom teaching can get lost.

Systems are important. Isolated pockets of good teaching will not help struggling schools or districts improve. However, as states and districts strive to drive change through structures, policies, and programs, teachers are often among the last stakeholders to be brought on board. Fullan argues that systemic reform will not work if it ignores individual teacher practice. As he and Hargreaves point out in their [2012 book *Professional Capital*](#), “When expertise is imposed...it promotes and perpetuates a passive view of the teacher, who is seen as empty, deficient, and lacking in skills—needing to be filled up and fixed up with new techniques and strategies. It develops things for teachers, not by them or with them.”

From EDC’s decades of advancing students’ college and career success, including our work in [Ford Next Generation Learning \(NGL\)](#), we have found that support for high-quality teaching must incorporate four key attributes:

- Assume and build on existing teacher capacity
- Give teachers a clear reason to engage

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When EDC supports teachers, we start by listening. We talk with teachers to help them identify their strengths and classroom approaches and align their instructional strategies with school and district goals. Our strengths-based approach flips traditional teacher support on its head: rather than addressing deficits, our approach builds on existing capacities.

Effective teacher support must give teachers the opportunity to apply new knowledge and skills to their day-to-day work. Research has shown that students learn best and most deeply when they apply knowledge and skills in an authentic context. But it is less well known that research supports similar findings with adult learners.

- Be immediately relevant to teachers' work
- Support teachers in taking creative risks

Assume and Build on Existing Teacher Capacity

Effective teacher support must assume that teachers have professional capacity. As teachers can testify, a surprising number of coaching and professional development approaches are designed to “teacher-proof” classroom practice. These models seem to focus on providing strategies that work in spite of teachers, not because of them. When EDC supports teachers, we start by listening. We talk with teachers to help them identify their strengths and classroom approaches and align their instructional strategies with school and district goals. Our strengths-based approach flips traditional teacher support on its head: rather than addressing deficits, our approach builds on existing capacities. This entails asking questions specific to instruction, providing teachers with user-friendly tools for self-reflection, and serving as a mirror for teacher practice. This approach not only allows teachers to engage in learning as individuals, but it [builds organizational capacity for schools to become learning systems](#).

Give Teachers a Clear Reason to Engage

Effective teacher support must provide a compelling reason for teachers to engage—a basic, simple answer to “Why should I do this?” As multiple initiatives come down the pipeline for teachers every year, many adopt a “wait it out” mentality that allows them to conserve their energies for the classroom and their students. Often, district and school leaders are aware of the research, rationale, and evidence base for specific strategies they want to implement, but teachers are not privy to that information. To address this need, we design all our work with teachers to incorporate a clear rationale, relevant supporting research and evidence, and room for teachers to frankly discuss whether and why that evidence is consistent with their own experiences and observations.

Be Immediately Relevant to Teachers' Work

Effective teacher support must give teachers the opportunity to apply new knowledge and skills to their day-to-day work. Research shows that students learn best and most deeply when they apply knowledge and skills in an authentic context. But this [is also true for adult learners](#). For example, working with our Ford NGL partners in Nashville, we asked teachers to use professional development time to think as instructional designers and develop project-based interdisciplinary learning activities with their teams. We provided resources and structured conversations to deepen teachers' thinking around key college and career skills, such as critical thinking and

questioning. As a result, the teachers were immediately able to apply what they were learning to specific classroom activities. They argued with one another, asked questions, revised their work, and built on existing materials while integrating new learning. Afterward, they told us that the time they spent “thinking as instructional designers” and collaborating with each other was one of the most useful professional development sessions they had experienced because it built on what they knew and gave them time and space to work with one another as knowledgeable professionals.

Support Teachers in Taking Creative Risks

Effective teacher support must allow teachers to try new things and take risks. For teachers to refine their practice, they need to try new strategies. They cannot try new things or take creative risks if the accountability system in which they operate punishes them for doing so. At present, teacher effectiveness is sometimes defined and assessed very narrowly, as measured by standardized test scores. Moreover, there is a widespread [lack of consistency in how administrators measure teacher effectiveness](#). Teacher evaluation and accountability systems must be aligned to expectations for implementation of new learning. Before any planning and support takes place with teachers, we pave the way. We work with school and district leaders to ensure that there is common understanding of what teachers are expected to learn and be able to do. We talk about what changes in practice will look like. And we talk about how these expectations for change will be reflected in school-based practices, such as classroom walkthroughs and observations. These conversations ensure that teachers are supported in shifting practice. They also build the capacity of school and district instructional leaders to align evaluation with learning outcomes for both teachers and students.

Our professional development approach has helped Ford NGL teachers transform classrooms, while respecting the strengths they bring to the process. Teaching is difficult, passionate, and often underappreciated work. Those of us who work in partnership with teachers know that there are very real challenges to transforming practice that must be acknowledged and addressed openly and collaboratively. Most of all, it is imperative to keep in the forefront the real and very human people bringing the best of themselves to their students every day.

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Supporting Connected Educators



By Nevin Katz —What does it mean to be a connected educator? Today, it brings to mind using social networking platforms like Twitter to share resources with colleagues, or perhaps bringing Skype into the classroom to get students to talk to an expert zoologist. It might feature learning from colleagues across the globe via webinar how to use iPads for fieldwork. On the other hand, it might involve a class contributing to an online data collection project with schools from other parts of the country. For many teachers, picking up these techniques is not a trivial task. There is much to learn about education in the digital era and, for a teacher, sometimes the best way to acquire new techniques and stay connected to other colleagues is through facilitated online courses.



Over the past eight years, for EDC's [EdTech Leaders Online \(ETLO\) program](#), I have designed and facilitated online courses for educators from a range of backgrounds. In this role, I have had the opportunity to help teachers, administrators, and support specialists enhance their science and math teaching, bring blended learning into the classroom, and design their own online courses. I have seen many benefits to bringing educators together online—particularly in the blended-learning cohorts I have facilitated, in which high school and middle school teachers learn how to integrate technology and online learning into their classrooms.

Fueling Rich Discussions

Online discussion forums are a central part of the courses I facilitate. These forums usually focus on a weekly discussion prompt—a generative, open-ended discussion question that invites responses from educators who teach a range of subjects at different grade levels. In response to the prompt, a participant responds (“starts a thread”), others contribute their own posts, and the group ultimately builds a conversation to which everyone can contribute. These conversations can become very vibrant and allow teachers to dig more deeply into a topic than they could in a face-to-face professional development setting, where the constraints of time and space limit how deeply a group can discuss a particular topic.

Checking into the forums on a given afternoon, I find teachers continually sharing ideas—how to make their lessons accessible to students with special needs, how to assess student work in the online environment, how to bring mobile devices into their classrooms. While facilitating online courses on Weather and the Earth-Moon-Sun system with teachers from New Bedford, Mass., I was amazed at how many resources and ideas they shared with each other on topics such as teaching shadows, modeling eclipses, and relating the tilt of the earth to the seasons. Unlike a daylong workshop, I was also able to learn about some of the participants’ outcomes—such as a successful wiki that a teacher developed or students wanting to stay in from recess to try out an interactive their teacher introduced them to during the course.



Teaching is an all-consuming endeavor, and with all of the day-to-day demands of teaching, planning, grading, and organizing, the prospect of venturing out on a regular basis to a physical professional development setting can be daunting.



Tailoring Connection to Fit Teachers' Needs

The fact that educators are able to connect with each other online at their convenience without having to be in a physical location is huge. Teaching is an all-consuming endeavor, and with all of the day-to-day demands of teaching, planning, grading, and organizing, the prospect of venturing out on a regular basis to a physical professional development setting can be daunting. Being able to log on at your convenience—in the evenings, on the weekends, before class—helps educators find the time to develop professionally while meeting the demands of their hectic schedules. I have also found that teachers will log on if they know they can access resources that will be useful to them at that moment. While there is great value in including current research written by experts in the field, it is important to complement it with online tools and pedagogical techniques that teachers can readily pick up and apply to their curriculum—such as wikis, online interactives, and tools such as [Geogebra](#).

Orienting Teachers to New Tools and Techniques

To make the on-ramp to classroom use as smooth as possible, it is key to show teachers how to use new techniques and tools and to have them apply what they learn. I have found clear screencasts to be invaluable in showing teachers how to use techniques and tools ([here is a screencast I did on Geogebra](#)). EDC has embedded a good amount of screencasts in our ETLO courses—always testing to make sure instructions are clear before we launch a course—but I often find myself making ad hoc screencasts to help a teacher use a particular feature in a tool like [Google Earth](#). To enable teachers to practice and apply their learning, my fellow instructors and I give them a chance to use new tools/techniques in a final project of their own design.

Learning Communities: Small Can Be Beautiful

Massive open online courses (MOOCs) are growing in number and help meet the increasing demand for anytime-anywhere education. Yet I have seen tremendous value in a learning community whose numbers are small enough so that people can get to know everyone, learn about what others bring, and share resources and ideas through continual dialogue. As an online course facilitator, I am excited to be a part of these learning communities—clarifying concepts for individual educators, helping educators connect with each other, and supporting all in mastering new tools and techniques. For the motivated connected educator, this learning model can be nothing short of transformative.

Some Thoughts on Software for Teachers



By John Parris—I have been thinking a lot about usability lately. Usability as broadly defined on [Wikipedia](#) is “the ease of use and learnability of a human-made object.” More specifically, software usability is defined by the [Nielsen Norman Group](#) as “a quality attribute of the user interface (UI), covering whether the system is easy to learn, efficient to use, pleasant, and so forth.”

At EDC, I have worked on many projects that combine research and software development to create applications for teachers. This audience has gotten me thinking beyond software interface usability, which is relatively well understood if not always achieved, to considering two other dimensions: classroom and professional usability.

Classroom Usability

This dimension considers the constraints of managing time, space, materials, and students. We all say we know that teachers are pressed for time. But when designing software for teachers, it's imperative to really understand and keep in mind the realities of the teacher's work life. Most importantly, what teacher need are you providing for? Do they really need your software? Once you have determined (or convinced yourself) that teachers need your software, you must ask even more questions:

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The introduction of new technologies can be the thin edge of the wedge for pedagogical change across the spectrum of the professional experience. Teachers pause to ask “Is this useful to my practice?” And during that pause they may reflect and be especially open to new ideas and approaches.

- **Context of Use:** When and where are you expecting a teacher to use your software? After school? On weekends? During the summer? Five minutes before class? During class? At each of these times, teachers have different constraints, priorities, and access to tools and information. You must design your software to address their need in relation to the time they have to receive, absorb, and use what you are providing.
- **Type of Tool:** What device are you designing for—a laptop, a desktop, a tablet, or a smart phone? What access do teachers have to the device, and at what times of the day?

Creating “use cases” that take into account teacher’s time, context, and equipment is a good starting place to explore how your tools and messages might best be useful. ([Learn more about how to create a use case.](#))

Professional Usability

It seems obvious to state that not all teachers are the same, and in our work we usually target specific domains and grade bands—for example, middle school science teachers or preschool teachers teaching early mathematics. Yet we often fail to understand how teachers at different points along a continuum of professional development will perceive and use our products. Many teachers who are in the early stages of their careers are hungry for a variety of supports, from classroom management to pedagogical strategies to assistance with subject matter. Their response: “I need all the help I can get.” Many veteran teachers, on the other hand, are less likely to seek out or even consider advice in matters on which they feel they have achieved mastery (especially if it comes in the form of a website or app). Their response: “I know my stuff, why do I need this?”

The introduction of new technologies can be the thin edge of the wedge for pedagogical change across the spectrum of the professional experience. Teachers pause to ask “Is this useful to my practice?” And during that pause they may reflect and be especially open to new ideas and approaches. So how do we address this wide variety of experience within a website or application? One approach is to develop materials that are highly targeted to specific points in the continuum. Another is to create software that helps teachers identify their place in that continuum without seeming to pass judgment on their skills. In this way, they can self-select how they will use the software based on their self-identified professional learning goals. Personalized learning is all the rage in online learning for students. Yet even algorithmically driven software for teachers would require deep knowledge of all of the possible classroom cultures and professional trajectories of teachers.

Steps to Tackling Usability

Revisit the goals of your product. Where do they match expressed needs of teachers? Can you attune your goals to meet teachers' day-to-day needs?

- **Analyze the workflow and habits of your target audience.** Identify teachers' key moves. How do they use the tools they already have to accomplish their aims? What gaps emerge and which of their needs are unfulfilled?
- **Engage teacher users early in the iterative design process—the cycle of prototyping, testing, analyzing, and refining.** Bring teachers into the lab and go out into classrooms.
- **Develop use cases and/or personas** ([a persona is a fictional person who represents a major user for your product](#)). Make sure that your use cases and personas reflect teachers who are at different points on the professional continuum.
- **Don't make usability an afterthought.** Consider including a usability analyst early in your design phase, not just for testing functional prototypes.

In this essay, I sought to introduce the idea that we might gain from broadening our conception of usability as we design software for teachers. I welcome comments about efforts that are delving into these workplace and work-life dimensions.

Engage teacher users early in the iterative design process—the cycle of prototyping, testing, analyzing, and refining. Bring teachers into the lab and go out into classrooms.



Sampler of EDC's Free Professional Learning Resources

All of the following resources are free. You can view more of our materials for educators [in this Resource Library](#) or learn more about our [support for educators in other countries here](#).

[REL Northeast & Islands at EDC Professional Development Workshops](#)
Educators can take these online workshops at their own pace and receive certificates for the ones they finish. Two courses may be of particular interest: “Developing Program Evaluations to Support Improvement” and “Understanding Data Use to Improve Instruction.” REL’s website also offers webinars, reports, videos, briefs, and infographics that present findings on topics such as teaching English learners, competency-based learning, educator evaluation, and early learning.

[Mathematical Thinking: Supports for English Learners](#) offers middle school math teachers proven strategies to support English learners’ success. The website has 14 math tasks and related language tools, including warm-ups, sentence starters and frames, word charts, and Spanish translations. Teachers can download or print all 14 tasks and related resources. In 2016, the developers of this site published a new book with related information; [download a sample here](#).

[Zoom In!](#) This Web-based platform helps educators empower students to think deeply and write critically about pivotal moments in U.S. history ([read a teacher's review](#)). Eighteen free lessons engage students in “deep dives” into primary and secondary sources and support teachers in monitoring students’ learning and fine-tuning their instruction to deepen students’ understanding. Launched in late 2015, Zoom In currently has 26,000 users from 50 states and 149 countries.

[Success at the Core](#), an online professional learning toolkit developed by EDC and Vulcan Productions, features videos that show real teachers using evidence-based practices to enhance students’ math, English language arts, and science learning. It also includes a rich array of resources focused on instruction, assessment, curriculum, and student support. In use by teachers and leadership teams throughout the U.S. and around the world, [Success at the Core has won multiple awards for excellence and innovation](#).

[PowerUp](#)—developed by EDC, AIR, and CAST—is an interactive professional learning environment that builds the capacity of teachers and leaders to use evidence-based practices, universal design for learning (UDL) principles, and technology to improve student engagement, motivation, and outcomes in mathematics and English language arts. The toolkit has a special focus on supporting educators in improving teaching and learning for struggling students and those with disabilities.

[PromotePrevent](#) provides rich resources for educators focused on the health, mental health, social-emotional development, and safety of young children and youth. Topics include bullying prevention, positive school discipline, and an effective process that educators and community members can use to collaborate to create safe schools and healthy communities. Resources also share strategies to support school-community information sharing and create classrooms in which all students thrive.

[Adobe Youth Voices Program Guide](#) orients and supports educators in creating, planning, and implementing innovative media projects with young people. The guide provides tools, examples, and tips that will help launch and sustain effective youth media programs. While it challenges users to develop their own approach, the guide is also meant to inspire readers with examples of successful projects from around the globe. (Create a free account to access the guide and other Adobe Youth Voices resources.)

[Implementing the Mathematical Practice Standards](#) offers in-depth information about the Common Core Standards for Mathematical Practice and how to connect them to the content standards. Recognized by the National Council of Supervisors of Mathematics as an outstanding “Leadership Resource,” the website features a series of illustrations, centered on student dialogues, which help educators see the Standards for Mathematical Practice in action and plan how to implement them.



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